6. The method of any one of claims **1** to **4**, wherein the therapeutic anti-LIF antibody is humanized.

7. The method of any one of claims **1** to **6**, wherein the level of LIF is a LIF protein level and determining the level comprises performing at least one assay that detects LIF protein or receiving the results of at least one assay that detects LIF protein.

8. The method of claim **7**, wherein the at least one assay comprises immunohistochemistry.

9. The method of claim **8**, wherein the reference level is about 1%, 2%, 3%. 4%, 5%, 6%, 7%, 8%, 9%, 10%, 15%, 20%, 25%, 30%, or 35% of cells staining positive with an anti-LIF antibody.

10. The method of claim **8**, wherein the reference level is or exceeds an IHC-score of about 10 to about 100.

11. The method of claim **7**, wherein the at least one assay comprises enzyme linked immunosorbent assay (ELISA).

12. The method of claim **11**, wherein the ELISA detects electrochemiluminescence.

13. The method of claim **11** or **12**, wherein the reference level is about 4 pg/mL of LIF in an undiluted biological sample from the individual.

14. The method of any one of claims **7** to **13**, wherein the reference level of LIF corresponds to the 5^{th} percentile, 10^{th} percentile, 25^{th} percentile, or the 50^{th} percentile of LIF protein expression in LIF positive human cancers of the same type.

15. The method of any one of claims **7** to **13**, wherein the reference level of LIF corresponds to the 5^{th} percentile, 10^{th} percentile, 25^{th} percentile, or the 50^{th} percentile of LIF protein expression in human cancer.

16. The method of claim **15**, wherein the human cancer is selected from the list consisting of lung cancer, ovarian cancer, kidney cancer, bladder cancer, pancreatic cancer, prostate cancer, genitourinary cancer, gynecologic cancer, gastrointestinal cancer, endocrine system cancer, glioblastoma multiforme, breast cancer, melanoma, colorectal cancer, bile duct cancer, cervical cancer, endometrial cancer, head and neck squamous cell carcinoma, and combinations thereof.

17. The method of claim **16**, wherein the human cancer is selected from the list consisting of non-small cell lung cancer, glioblastoma multiforme, epithelial ovarian carcinoma, pancreatic adenocarcinoma, and combinations thereof.

18. The method of any one of claims **1** to **17**, wherein the biological sample comprises a blood sample.

19. The method of claim **18**, wherein the blood sample is plasma.

20. The method of claim **18**, wherein the blood sample is serum.

21. The method of any one of claims **1** to **18**, wherein the biological sample comprises a tissue sample.

22. The method of claim **21**, wherein the biological sample is a tumor biopsy.

23. The method of any one of claims **1** to **22**, wherein the method further comprises determining a protein level of an immunomodulatory molecule that exceeds a reference level of the immunomodulatory molecule.

24. The method of claim **23**, wherein the immunomodulatory molecule is selected from CCL7, CCL2, CCL3, and CCL22.

25. The method of any one of claims **1** to **24**, wherein the method further comprises determining a protein level of an immunomodulatory molecule that is below a reference level of the immunomodulatory molecule.

26. The method of claim **25**, wherein the immunomodulatory molecule is selected from WICK CXCL9, CXCL10, CXCR3, and PD-L1.

27. The method of any one of claims **1** to **26**, wherein the method further comprises determining a level of a Type II macrophage (M2) marker that exceeds a reference level of protein of the Type II macrophage (M2) marker.

28. The method of claim **27**, wherein the M2 marker is selected from the list consisting of CD206, CD163, PF4, CTSK, and ARG1.

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